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Turbulent Richtmyer-Meshkov Experiments*,

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LLNL, Livermore, CA 94550. The Richtmyer-Meshkov instability is investigated at high compression using the Nova laser to produce Mach > 10 shocks. The target has two components at solid density with Atwood number ~ -0.88. The growth of imposed 3D random interfacial perturbations is measured radiographically using x-ray opaque diagnostic tracers in two configurations. The turbulent mixing width h is found to increase with the displacement of the interface δZ as $h \sim \delta Z^{0.5}$ in accordance with the large structure model of Shvarts and Alon.

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